4. (Amended) The handling device as claimed in claim 1, characterized in that grippers (44, 60) can be pivoted into two end positions, being located in a first end position in an empty position and in a second end position in a transport position for wafers of the gripping device (43), in which they transport wafers substantially parallel to the storage device (42).

6. (Amended) The handling device as claimed in claim1, characterized in that grippers (44, 60) of the gripping device (43) can be moved rectilinearly, substantially parallel to the surfaces of the wafers and transversely with respect to the direction of movement of the gripping device (43) independently of other grippers (44, 60) of the gripping device, being located in a first end position in an empty position and in a second end position in a transport position for wafers of the gripping device (43), in which they transport wafers substantially parallel to the storage device (42).

7. (Amended) The handling device as claimed in claim 1, characterized in that it is possible to insert into the storage device (42) a number of wafers which at least substantially corresponds to an integer multiple of the number of wafers which can be handled simultaneously by the gripping device (43).

8. (Amended) The handling device as claimed in claim 1, characterized by a transfer station (40) arranged in the travel path of the gripping device (43) and having a temporary store for wafers, in which a plurality of wafers can be arranged with their surfaces parallel to one another, it being possible to use the gripping device (43) to transfer wafers from the storage device (42) to the transfer station (40) and vice versa.

14. (Amended) The method as claimed in claim 12 , characterized in that the gripping device (43) grips wafers (48) of a wafer batch arranged in a transfer station, sets down the wafers (48) at storage locations belonging to the storage device (42) and stores the positions of each of the wafers (48) in the storage devices (42), together with data for the identification of the batch in which the wafer was previously located and/or data with respect to processing processes already passed through by the respective wafer.

A3

15. (Amended) The method as claimed in claim 12 , characterized in that the gripping device (43) moves substantially parallel to a stack direction of the wafers between the removal of a first and the removal of a last wafer (48).